



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	MONTROSE, CO	<b>Accident Number:</b>	DCA98MA002
<b>Date &amp; Time:</b>	10/08/1997, 0723 MDT	<b>Registration:</b>	N12022
<b>Aircraft:</b>	Cessna 208B	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	9 Fatal
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

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## Analysis

The airplane departed under visual flight rules (VFR) for a flight over mountainous terrain. It was tracked by radar from the departure area to the accident site. While climbing at the normal rate of climb to 15,400 feet, the airplane abruptly disappeared from radar. The wreckage was located among pine trees and exhibited evidence of a steep flightpath angle and damage consistent with a stall/spin event. Investigation revealed no indication of airframe or flight control anomalies, and the powerplant and propeller damage was consistent with engine operation at moderate to high power. Evidence indicated that the airplane was free of airframe ice at impact. Postaccident calculations indicate that the airplane was near the maximum certificated gross weight and aft center of gravity limit. The pilot did not maintain instrument flying currency and reportedly avoided instrument meteorological conditions (IMC). Evidence indicated that the pilot did not use oxygen, as required (when flying above 12,000 feet). Ground observations and satellite and Doppler radar imagery indicated widespread cloudiness over the mountains west of Montrose on the day of the accident. Satellite data showed variable cloud tops higher than the airplane's flight altitude in the vicinity of the accident. The radar plot of the aircraft during the climb above 10,000 feet indicated course changes from the southwest to the northwest, back to the southwest and then a sharp turn to the right just prior to the rapid descent.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's failure to maintain sufficient airspeed for undetermined reasons while maneuvering the airplane near the maximum gross weight and aft cg in or near instrument meteorological conditions, resulting in the loss of control and entry into a stall/spin. Factors contributing to the accident were the pilot's improper in-flight planning and decision-making and his failure to use proper stall/spin recovery techniques.

## Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: CLIMB

### Findings

1. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
2. (F) WEATHER CONDITION - CLOUDS
3. (F) TERRAIN CONDITION - HIGH TERRAIN
4. (F) WEATHER CONDITION - LOW CEILING
5. (F) VFR FLIGHT INTO IMC - INADVERTENT - PILOT IN COMMAND
6. (F) LACK OF RECENT INSTRUMENT TIME - PILOT IN COMMAND

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Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: CLIMB

### Findings

7. (C) MANEUVER - INITIATED - PILOT IN COMMAND
8. PHYSICAL IMPAIRMENT(ANOXIA/HYPOXIA) - PILOT IN COMMAND
9. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
10. (C) STALL/SPIN - INADVERTENT - PILOT IN COMMAND
11. (C) REMEDIAL ACTION - INADEQUATE - PILOT IN COMMAND

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

### Findings

12. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY

## Factual Information

### HISTORY OF FLIGHT

On October 8, 1997, at 0723 mountain daylight time, N12022, a Cessna 208B, departed controlled flight and collided with terrain at the 9,900 foot level on the Uncompahgre Plateau, about 18 nautical miles (nm) southwest of Montrose, Colorado. The pilot and all eight passengers were killed. The flight was an on-demand air charter operated by the Department of the Interior (DOI) under 14 CFR Part 135. The flight was chartered to transport eight employees of the Bureau of Reclamation from Montrose, Colorado, to Page, Arizona. The registered owner of the airplane was Scenic Airlines Inc., of North Las Vegas, Nevada.

The pilot operated the first leg of the roundtrip charter flight from Page, Arizona, to Montrose, Colorado, on October 6, 1997. The flight was uneventful, and the pilot departed the airport about 1800 for a local motel. The return flight was scheduled to depart Montrose at 1700 on October 7. The pilot called the Scenic Airlines scheduler about 1200 and stated his concern about the passage of a cold front and the presence of less-than-VFR weather along the route of flight. He called back about 1500 and, after discussion, delayed the return trip until 0700 the following day, October 8. The pilot returned to the motel for a second night. On the morning of the accident flight, the pilot and passengers were at the airport about 0630.

Visual meteorological conditions prevailed upon takeoff. The flight departed from runway 17 of Montrose Regional Airport (elevation 5,759 feet msl) on a company visual flight rules (VFR) flight plan about 0705.

About 0710, a Federal Aviation Administration (FAA) radar National Track Analysis Program (NTAP) database target squawking VFR transponder code 1200 was recorded on a track from the Montrose area to the accident site. During the climb from 10,000 feet, the target airplane's course changed from southwest to northwest, back to southwest, and then made a sharp turn to the right. Climb performance was similar to data provided in the Pilot's Operating Handbook. The recorded radar information indicated that the target airplane climbed to a peak altitude of 15,400 msl then disappeared from radar. No emergency locator transmitter (ELT) signal was received. The airplane was reported overdue and a ground search party located the airplane wreckage about 50 hours later in the vicinity of the last recorded radar position. The wreckage was situated among 60-foot-high pine trees with evidence of a steep flight path angle (about -65 degrees), an approximate flat pitch attitude, and little indication of forward speed. There was a fuel spill in the surrounding area but no evidence of fire, either postcrash or in flight. All of the airplane occupants were located within the airplane fuselage.

The accident occurred during daylight hours at 38 degrees, 19 minutes, 23.8 seconds North latitude, and 108 degrees, 12 minutes, 43.6 seconds West longitude.

### DAMAGE TO THE AIRCRAFT

Impact forces destroyed the airplane. The estimated value of the airplane was about \$1.2 million.

### OTHER DAMAGE

The crash site was unimproved range land. Although the immediate area received some

ecological damage from spilled aviation fuel, overall damage was minimal.

#### PERSONNEL INFORMATION

The male pilot, age 63, possessed an FAA Airline Transport Pilot certificate issued in 1994. Ratings and limitations were: Airplane Multiengine Land, Commercial Privileges, Airplane Single-Engine Land. No type ratings were listed. His FAA First Class Medical Certificate, dated December 30, 1996, contained the limitation "must have available glasses for near vision."

The pilot was qualified to fly the Cessna 208B on May 9, 1995. Prior to that qualification, he was assigned as a second-in-command pilot on Scenic Airlines de Havilland Twin Otter airplanes. The pilot's most recent Part 135 proficiency check was administered April 18-22, 1997, in a Cessna 207. The handwritten statement "instrument competency demonstrated" appeared on FAA Form 8410-3, "Airman Competency/Proficiency Check." His most recent Part 135 line check was administered in a Cessna 208B on May 30, 1997.

The pilot's primary employment was to fly sightseeing trips in and around the Grand Canyon area of Arizona, Utah, and Nevada. Scenic Airlines records indicate the pilot had logged 12,900 hours of total flying time. Examination of the pilot's personal logbooks showed a total of 19.7 hours of flight in actual instrument conditions. This instrument experience was accumulated between 1987 and 1994. The pilot was not qualified to serve as a pilot in command of a 14 CFR 135 operation under instrument flight rules (IFR). He did not maintain instrument flying currency under 14 CFR 61.57, "Recent flight experience: Pilot in command." Colleagues described the pilot as one who had no intention of entering instrument meteorological conditions (IMC) at any time.

#### AIRCRAFT INFORMATION

The Cessna 208B, serial number 208B0432, was registered as N12022 to Scenic Airlines on August 17, 1995. The airplane was configured with nine passenger seats in addition to the pilot and copilot seats. On the accident flight, the copilot seat and the passenger seat immediately behind the pilot were not occupied.

Before the accident flight, the airplane total time and cycles were 2,598.5 hours/3,680 cycles. The airplane was equipped with a Pratt and Whitney PT6A-114A turbopropeller engine rated at 675 horsepower and a McCauley 3GFR34C703, three-bladed, constant-speed, full-feathering propeller. The engine, serial number 19315, and the propeller assembly had the same time and cycle history as the airframe. The airplane complied with all applicable airworthiness inspections and FAA airworthiness directives. There were no unresolved or recent, pertinent maintenance discrepancies.

The maximum certificated gross weight of the Cessna 208B is 8,750 pounds. The estimated takeoff weight of the accident flight was 8,874.5 pounds. The estimated ramp fuel load prior to the accident flight was 1,566 pounds of Jet A-1 fuel. Airplane operating manual climb charts indicate fuel required to climb to 15,400 feet is about 65 pounds. The certificated aft center of gravity (cg) limit is 204.35 inches aft of the datum. The estimated takeoff cg was 203.84 inches, within an area characterized by a Note in the operating manual which states, "...area should be used only if an accurate cg determination has been obtained for that loading."

The airplane was equipped with a supplemental oxygen system. The oxygen bottle contents were under pressure and discharged during the investigation. Postcrash inspection revealed

one breathing mask in the airplane stowed near the right, front passenger entry door.

#### METEOROLOGICAL INFORMATION

Scenic Airlines flight-following personnel reported that the pilot communicated with them via telephone in the morning hours before the accident flight regarding the weather. They did not note or recall the specific details of that conversation. FAA records do not indicate that the pilot of N12022 received a weather briefing from an FAA facility on the morning of the accident flight.

The Surface Analysis chart prepared by the National Weather Service for 0600 October 8 showed a cold front extending through eastern Colorado, curving southwestward through southeastern New Mexico, and extending into northern Mexico. The chart also indicated a weak center of high pressure located over north central Arizona.

The Aviation Area Forecast for the Rocky Mountain Area, issued by the Aviation Weather Center at Kansas City, Missouri, and valid for Colorado during the accident period, indicated:

Mountains and west...scattered-broken 9,000 feet broken 11,000 feet top flight level 24,000 feet with occasional visibility 3-5 miles mist and widely scattered light rain showers. 1200 scattered 12,000 feet. Outlook... visual flight rules.

A National Weather Service Airman's Meteorological Information (AIRMET) weather advisory valid for the accident area and time indicated:

Occasional moderate rime/mixed icing in cloud in precipitation between freezing level and flight level 20,000 feet. Freezing level surface-8,000 feet west of GJT-RIW-50NNW ISN line...8,000-12,000 feet east of that line. Conditions moving eastward.

No National Weather Service Significant Meteorological Information (SIGMET) weather advisory or Convective SIGMETs were valid for southwestern Colorado around the accident time. The Denver Center Weather Service Unit issued no center weather advisories that were valid for the accident area.

The surface weather observations for the Montrose Airport, located about 4,000 feet below and 18 nm northeast of the accident location closest to the departure time, were as follows:

Time-0653; type-METAR; wind-190 degrees at 9 knots; visibility-10 miles; present weather-none; sky condition-overcast 9,500 feet; temperature-7 degrees C; dew point-0 degree C; altimeter setting-29.86 inches hg; remarks-thunderstorm information not available.

Time-0753; type-METAR; wind-210 degrees at 4 knots; visibility-10 miles; present weather-none; sky condition-scattered 5,000 feet broken 6,500 feet overcast 9,500 feet; temperature-7 degrees C; dew point-0 degree C; altimeter setting-29.89 inches hg; remarks-thunderstorm information not available.

Radar data from the Grand Junction Weather Surveillance Radar-1988, Doppler System (WSR-88D) for the time of the accident indicate reflectivity consistent with visible moisture from clouds in the vicinity of N12022's last recorded radar position and flight altitude.

Geostationary Operational Environmental Satellite-8 data for the time of the accident indicate variable cloud tops over the mountains west of Montrose. The radiative temperature in the vicinity of N12022's last recorded radar position compared to the Grand Junction upper air sounding temperature gradient is consistent with cloud tops around 16,000 feet msl.

A hunting party located within about a mile of the crash site reported that the area of the Uncompahgre Plateau was obscured with fog throughout the day of the accident.

## COMMUNICATIONS

No distress calls were reported from aircraft in the area within the timeframe of the accident, and no air/ground communications from the accident aircraft were recorded. The departure point, Montrose Regional Airport, does not have an air traffic control (ATC) tower. Users of the airport common traffic advisory (CTAF) frequency had no recollection of any communications with the departing Scenic Airlines airplane. There are no requirements for the pilot of this VFR flight to have initiated any ATC communications.

## WRECKAGE AND IMPACT INFORMATION

The airplane impacted wooded terrain that consisted of numerous pine trees averaging 60 feet in height and a packed mud surface. No evidence of freshly sheared tree tops or branches was found at the site. The entire airframe remained intact and was lying upright within the confines of its preimpact dimensions. The engine and one propeller blade remained attached to the fuselage structure; the other two propeller blades were nearby.

The magnetic bearing of the longitudinal axis of the airplane was 146 degrees. A ground scar in the shape of the base of the tail of the airplane was found under the rear portion of the wreckage; the magnetic bearing of its longitudinal axis was 160 degrees. The aircraft was severely crushed along its vertical axis. Except for the vertical stabilizer, the height of the wreckage did not extend more than 3 feet above the ground. When the wreckage was removed from the site, a depression of 12 to 18 inches remained in the ground.

The engine cowling, magnetic compass, and pieces of the windshield were distributed to the northeast of the airplane's nose for about 35 feet. A piece of wheel/brake assembly was found about 75 feet to the west of the wreckage. The remainder of the area was undisturbed. There was no evidence of an in-flight structural failure or fire.

The engine, nacelle, and propeller displayed moderate impact damage and no indications of fire damage. Examination disclosed no preexisting failures or conditions that would have prevented normal engine operation. The propeller displayed bending signatures and witness marks that indicated moderate to high power output from the engine. Plastic windscreen and wiring fragments had melted and adhered to the engine ducts; however, there was no evidence of combustion. The cockpit instruments disclosed engine oil pressure, oil temperature, interturbine temperature, torque, propeller revolutions per minute (rpm), and gas generator rpm indications consistent with engine operation at impact.

The fiberglass cargo pod installed on the belly of the fuselage were crushed and embedded into the ground. Miscellaneous cargo and baggage was found within the pod underneath the fuselage. The total weight of the cargo and baggage within the pod was 243 pounds. One cargo item, a Bureau of Reclamation electrical test set with support equipment, was found in the fuselage aft cargo compartment. It weighed 212 pounds. It did not appear to have been tied down within the compartment.

No evidence of a preimpact flight control malfunction was found. Flight control cable continuity for the rudder and elevator was established from the control surface through the rear bellcrank and pulley sector to the aft cabin partition. Flight control cable continuity for the ailerons and roll spoilers was established from the control surfaces through the wing roots.

The airspeed indicator needle indicated 35 knots. The altimeter indicated 0 feet. The altimeter setting read 29.88 inches Hg. The directional heading indicator was destroyed. The attitude indicator was partially crushed and indicated a 20 degree, nose-down pitch attitude with wings level. The vacuum-driven gyro in the attitude indicator was extracted from its housing, and an examination of the outer surface of the rotor revealed rotational scoring. The turn/bank coordinator was destroyed. No useful reading could be obtained from the vertical speed indicator.

The autopilot flight computer received severe impact damage; no reliable switch positions could be obtained.

All cockpit switches, circuit breakers, and controls associated with the pitot/static system received severe impact damage; no reliable switch positions could be obtained.

The airplane was equipped with an icing equipment package certified for flight in icing conditions. The package included pneumatic deicing boots on the wings, wing struts, horizontal stabilizer, and vertical stabilizer. The package also included electrically heated propeller blade anti-ice boots, a detachable electrical windshield anti-ice panel, a pitot/static heat system, and a standby electrical system. The detachable electrical windshield anti-ice panel was not installed and was found in the aft cargo compartment area of the wreckage. The airplane was not equipped with any ice protection for the landing gear struts or cargo pod. The engine inertial separator vane within the engine air inlet duct was in the normal mode.

All cockpit anti-ice/deice switches and controls were either broken or missing. No reliable information regarding preimpact positions could be extracted.

The deice boots for the horizontal stabilizers were found intact. No ice was found on them, and evidence of mud splatter was seen along the span of each boot. The deice boots for the vertical stabilizer were intact and clean and did not exhibit evidence of ice accretion. The deice boots from the wings and wing struts received severe impact damage and were partially separated.

The airplane was equipped with a Pointer, Inc. ELT that was compliant with the requirements of FAA Technical Standard Order (TSO) C91. It had separated from its mounting bracket and was found lying loose inside the aft fuselage. One end of the ELT's antenna coaxial cable was secured to the ELT antenna receptacle, and the other end was secured to the fuselage antenna. The antenna remained intact at its mounting located on top of the tailcone.

The ELT master switch was found in the "AUTO" position. No signal was being transmitted from the unit at the time it was found. The master switch was then placed in the "ON" position; the transmitter annunciator light did not illuminate and no signal was being transmitted. Local search and rescue personnel reported that no ELT signal was ever received from the wreckage site.

#### MEDICAL AND PATHOLOGICAL INFORMATION

The pilot's FAA Application for Medical Certificate, dated December 30, 1996, indicated an unremarkable medical history. On his application, the pilot denied the use of medications, eye or vision trouble, or recent surgery. However, information provided by his private physician revealed that the pilot was prescribed three medications: Zocor (10 mg. before bed) for hypercholesterolemia and prednisone (5 mg. a day) and Seldane (60 mg. twice a day) for chronic urticaria (hives). The physician was aware that his patient was a pilot and was unaware of any side effects experienced as the result of the medications. He noted that the pilot's

chronic urticaria was well controlled. He stated that the pilot's EKG was essentially normal and that he had no records that would indicate any signs or symptoms of cardiac or pulmonary disease.

The pilot's private physician also revealed that the pilot had cataract surgery with intraocular lens implantation in his right eye in August 1996; the same procedure was performed in the left eye in December 1996. A pair of nonprescription sunglasses was found near the pilot's remains at the crash site. Corrective lenses were not found on the pilot or in his personal effects.

The following findings on the recovered portions of the pilot's remains are quoted from the autopsy report:

Sections of lung show mild to moderate emphysema with focal scarring and with acute disruption and hemorrhage, Sections of heart show focal disruption with hemorrhage with a fairly normal background architecture, Sections of the coronary arteries show calcific, eccentric, fibrofatty plaque, which narrows the lumen to less than 50 percent of its usual caliber. No acute hemorrhage is seen. No thrombosis is identified.

The FAA conducted forensic toxicology tests on fluid and tissue samples from the pilot's remains; no drugs were detected.

#### FIRE

There was no fire.

#### SURVIVAL ASPECTS

The accident was not survivable.

#### TESTS AND RESEARCH

The ELT was taken to the manufacturer where it was disassembled and examined. The examination revealed that the electrical power connector between the battery pack and the solid state circuitry of the transmitter was loose. The adhesive on the connector and the wall of the unit was brittle and the application of the adhesive was not uniform. The ELT was functionally tested and operated intermittently when the connector was moved slightly. The ELT was then examined at the Safety Board's Metallurgical Laboratory Division. The examination revealed that the seven strand conductors within the connector were tinned, crimped and then soldered. Electrical continuity within the connector was verified; however the electrical continuity from the power source to the circuit board was intermittent. The crimped area had nonuniform crimp impressions, solder extended into the insulation area, some of the insulation was melted, the connector was twisted, and the surrounding insulation was cracked. Examination of two other ELTs of similar make and model did not reveal similar construction anomalies.

#### ORGANIZATIONAL AND MANAGEMENT INFORMATION

The DOI operates an inspection and technical oversight program for vendor-procured aircraft through its Office of Aviation Services (OAS). The OAS was established in 1973 to "raise the safety standards, increase the efficiency, and promote the economical operation of aircraft activities in the DOI." Functions and responsibilities include implementation of department wide aviation safety and aircraft mishap prevention programs. The office has about 95 personnel, including contract specialists, pilot and maintenance inspectors, and an Air Safety Manager, with three air safety inspector/assistants. The OAS performs on-site inspections of



special operations flying (for example, fire suppression, smoke jumper delivery, aerial application, wildlife management); however, as a result of a DOT/USDA study conducted between December 1994 and March 1995 to target duplication of effort with the FAA, the OAS no longer inspects FAA-certificated operators performing point-to-point, on-demand transportation. OAS Form 12, "Basic Ordering Agreement," (an airplane rental agreement) contains contractual language and provisions, many of which reiterate FAA requirements. There are also some specific requirements for minimum pilot experience, personnel protective items, aircraft equipment, methods of billing and payment of vendors, and administration.

Neither the Federal Aviation Regulations (FARs) nor the OAS program requires that pilots of VFR flights be current in instrument flying. Also, the OAS program does not address the applicable requirements of the FARs that provide for the approval of single-engine, passenger-carrying operations under IFR. The OAS program requires either an FAA flight plan or a written flight-following procedure. Scenic Airlines had the latter. Also, the OAS program requires the use of an ELT compliant with either TSO-C91 or TSO-C91a.

#### USEFUL OR EFFECTIVE INVESTIGATION TECHNIQUES

Flight recorders were not carried on the airplane nor were they required by either FAA regulations or the OAS program for vendor-procured aircraft. In lieu of this data, NTAP data for a VFR target was assimilated to construct a probable flightpath for the accident flight. Communications and navigation frequencies set by the pilot were retrieved from the electronic display panels by interrogation of the nonvolatile memory within the equipment.

#### Pilot Information

<b>Certificate:</b>	Airline Transport	<b>Age:</b>	63, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>		<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 1 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	12/30/1996
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	05/30/1997
<b>Flight Time:</b>	12900 hours (Total, all aircraft), 1546 hours (Total, this make and model), 11300 hours (Pilot In Command, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N12022
Model/Series:	208B 208B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	208B0432
Landing Gear Type:	Tricycle	Seats:	9
Date/Type of Last Inspection:	09/23/1997, Continuous Airworthiness	Certified Max Gross Wt.:	8750 lbs
Time Since Last Inspection:	28 Hours	Engines:	1 Turbo Prop
Airframe Total Time:	2599 Hours	Engine Manufacturer:	P&W
ELT:	Installed, not activated	Engine Model/Series:	PT6A-114A
Registered Owner:	SCENIC AIRLINES, INC.	Rated Power:	675 hp
Operator:	SCENIC AIRLINES INC	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	OEZA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MTJ, 5750 ft msl	Distance from Accident Site:	18 Nautical Miles
Observation Time:	0653 MST	Direction from Accident Site:	45°
Lowest Cloud Condition:	Unknown	Visibility	10 Miles
Lowest Ceiling:	Overcast / 9500 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	190°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	7°C / 0°C
Precipitation and Obscuration:			
Departure Point:	MONTROSE, CO (KMTJ)	Type of Flight Plan Filed:	Company VFR
Destination:	PAGE, AZ (KPGA)	Type of Clearance:	None
Departure Time:	0705 MDT	Type of Airspace:	Class G

## Airport Information

Airport:	MONTROSE REGIONAL (KMTJ)	Runway Surface Type:	Asphalt
Airport Elevation:	5759 ft	Runway Surface Condition:	Dry
Runway Used:	17	IFR Approach:	
Runway Length/Width:	10000 ft / 150 ft	VFR Approach/Landing:	

## Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	8 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	9 Fatal	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	ROBERT M MACINTOSH	Report Date:	06/29/1999
Additional Participating Persons:	LARRY SMITH; WASHINGTON, DC GREGORY W SCHMIDT; WICHITA, KS JACK MARTIN; NO. LAS VEGAS, AZ LARRY BROSANAN; BOISE, ID		
Publish Date:	12/20/2013		
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).